

the northeast monsoon prevailed over the whole archipelago.

*Typhoon, December 4 to 7.*—This typhoon formed so far to the east of the Philippines and moved in such a way that it had no effect upon the weather of the archipelago. The approximate daily positions are given below:

December 4, 6 a. m., latitude 10° N., longitude 144° E.  
 December 5, 6 a. m., latitude 15° N., longitude 140° E.  
 December 6, 6 a. m., latitude 22° N., longitude 140° E.  
 December 7, 6 a. m., latitude 26° N., longitude 147° E.

*Typhoon, December 12 to 18.*—Forming southwest of Palau Island, this disturbance moved toward the archipelago as a depression, increasing in intensity as it moved. It was strong enough on December 13 and 14 to be called a typhoon, and then it weakened and slowly filled up. The positions of this typhoon are given below:

December 12, 6 a. m., latitude 5° N., longitude 133° E.  
 December 13, 6 a. m., latitude 8°20' N., longitude 129°30' E.  
 December 14, 6 a. m., latitude 10° N., longitude 125° E.  
 December 15, 6 a. m., latitude 10°30' N., longitude 123° E.  
 December 16, 6 a. m., latitude 12°20' N., longitude 122°30' E.  
 December 17, 6 a. m., latitude 12°20' N., longitude 121°30' E.  
 December 18, 6 a. m., latitude 11°30' N., longitude 117° E.

*Depression, December 16 to 19.*—This depression formed southwest of Yap and moved toward the Philippines, but lost what little energy it had before reaching the archipelago. Its approximate positions are given below:

December 16, 6 a. m., latitude 7° N., longitude 137° E.  
 December 17, 6 a. m., latitude 8° 30' N., longitude 135°30' E.  
 December 18, 6 a. m., latitude 10° N., longitude 132° E.  
 December 19, 6 a. m., latitude 10°20' N., longitude 130°30' E.

#### GALE IN THE RED SEA, NOVEMBER 1934

In the meteorological report received at the Weather Bureau from the British S. S. *Ramsay*, Capt. W. Shaw Hickman, master, Second Officer R. S. McLean, observer, is a description of a violent gale experienced on November 18, 1934, while northbound in the Red Sea. The ship at midnight (17th–18th) was in latitude 23°12' N., longitude 36°48' E., wind east-southeast, force 4, barometer 29.98 inches (uncorrected). At 1:15 a.m. the wind suddenly shifted to north-northeast, force 9, accompanied by heavy rain and thunder. At 2 a.m. the wind force rose to 10, with barometer steady at 29.98.

After 1:15 a.m., according to Mr. McLean, "the sea rose very quickly and the steamer commenced shipping water fore and aft, while spraying over all. At times heavy spray was thrown clear over top of chart room on top of bridge. The lookout man had to leave the forecastle head and take up position on the bridge, it being dangerous forward on account of sea rising so rapidly." By 2:10 a. m. the wind had decreased to northeast, force 4.

The observing officer referred to the stormy conditions as of exceptional character; and also drew attention to a thunderstorm experienced 12 hours previously, on the 17th, in which the wind, which was from a northerly direction, force 2, at noon "shifted suddenly with one leap" to south-southwest, force 6, at 1:35 p.m.

The two instances were mentioned as squalls extraordinary to this region, and moving in diametrically opposite directions. The pressure throughout remained at 29.98 inches.—W. E. H.

### CLIMATOLOGICAL TABLES

#### CONDENSED CLIMATOLOGICAL SUMMARY

In the following table are given for the various sections of the climatological service of the Weather Bureau the monthly average temperature and total rainfall; the stations reporting the highest and lowest temperatures, with dates of occurrence; the stations reporting the greatest and least total precipitation; and other data as indicated by the several headings.

The mean temperature for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperatures and precipitation are based only on records from stations that have 10 or more years of observations. Of course, the number of such records is smaller than the total number of stations.

*Condensed climatological summary of temperature and precipitation by sections, December 1934*

[For description of tables and charts, see Review, January, p. 37]

Section	Temperature								Precipitation					
	Section average	Departure from the normal	Monthly extremes						Section average	Departure from the normal	Greatest monthly		Least monthly	
			Station	Highest	Date	Station	Lowest	Date			Station	Amount	Station	Amount
	°F.	°F.		°F.			°F.		In.	In.		In.		In.
Alabama.....	46.7	-0.9	Pushmataha.....	80	30	Valley Head.....	10	12	3.41	-1.51	Milltown.....	6.76	Valley Head.....	1.83
Arizona.....	48.8	+2.3	Marinette.....	85	11	2 stations.....	0	3	1.71	+ .51	Crown King.....	4.18	Gila Bend.....	.11
Arkansas.....	41.5	-1.2	Portland.....	74	24	Dutton.....	4	11	3.78	- .51	England.....	6.85	Bentonville.....	.95
California.....	46.3	+ .7	2 stations.....	83	10	Sierraville.....	-12	31	3.20	- .50	Crescent City (near)	13.53	Brawley.....	.09
Colorado.....	28.9	+3.5	Two Buttes.....	79	22	Fraser.....	-24	4	.60	- .31	Columbine.....	3.13	6 stations.....	.00
Florida.....	60.0	- .0	Lake Placid.....	90	13	2 stations.....	16	12	1.00	-1.76	Pensacola.....	2.56	Everglades.....	.00
Georgia.....	46.9	-1.2	2 stations.....	82	13	3 stations.....	10	12	2.64	-1.62	Fort Gaines.....	6.02	Waycross.....	.88
Idaho.....	27.7	+1.8	Lewiston.....	82	19	Deadwood.....	-17	1	2.03	+ .05	Roland.....	9.78	Challis.....	.09
Illinois.....	28.3	-2.2	Du Quoin.....	59	4	Sycamore.....	-9	27	1.74	- .52	Cairo.....	3.30	Warsaw.....	.66
Indiana.....	28.9	-2.4	Shoals.....	60	2	Fowler.....	-12	27	2.00	- .88	Scottsburg.....	3.81	Shoals.....	1.08
Iowa.....	21.5	-2.4	Sioux City.....	48	22	4 stations.....	-17	11	.57	- .62	Clinton.....	2.01	Mt. Ayr.....	T
Kansas.....	33.1	+ .3	Liberal.....	72	28	Hanover.....	-5	7	.42	- .44	Eldorado.....	1.35	2 stations.....	.00
Kentucky.....	37.0	- .9	Middlesboro.....	69	1	Anchorage.....	5	12	2.18	-1.80	Lovelaceville.....	4.22	Whitesburg.....	.83
Louisiana.....	52.8	+ .4	2 stations.....	82	130	2 stations.....	14	12	3.91	-1.47	Dodson.....	7.69	Jonesville.....	1.91
Maryland-Delaware.	35.2	- .2	do.....	71	1	Oakland, Md.....	-16	11	2.75	- .40	State Sanatorium, Md.	4.71	Western Port, Md....	1.59
Michigan.....	23.4	-1.8	Webber Dam.....	66	1	Vanderbilt.....	-22	30	1.59	- .49	Painesdale.....	5.09	Lake City.....	.48
Minnesota.....	11.8	-3.7	4 stations.....	45	12	2 stations.....	-40	26	.95	+ .16	Reads.....	2.60	Willmar.....	.24
Mississippi.....	47.8	- .6	5 stations.....	80	130	do.....	12	11	4.53	- .81	Rosedale.....	7.29	Pontotoc.....	1.53
Missouri.....	31.6	-2.5	Garber.....	69	28	Downing.....	-3	26	1.66	- .41	Campbell.....	4.12	Unionville.....	.05
Montana.....	24.0	+1.1	Grass Range.....	67	11	Medicine Lake.....	-40	26	.91	+ .02	Haugan.....	6.83	Four Buttes.....	.03

1 Other dates also.